OPHA 2014 Panel Session

Public Health and Genomic Medicine: How do we get from here to there?

Moderator/Discussant

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> *In terms of human knowledge, Genomics--the study of the functions and interactions of all the genetic material (DNA) belonging to an organism, including interactions with environmental factors to understand the root causes of disease and to better understand how an organism works-- is hurtling toward us at warp speed. As astonishing new strategies, products and services evolve from genomic technologies in the next decade, it will become increasingly important for public health practitioners to enhance awareness, build competencies, and develop policy options that facilitate the widespread use of genomic knowledge in 21st century health settings in Oregon, and beyond.*

Read, Watch & Participate: Genetics and Public Health Genomics
http://genomicsforeveryone.org/week-1-genetics-and-public-health-genomics/

Panelists

Summer Cox, MPH, Oregon Genetics Program Coordinator, Oregon Public Health Division, Oregon Health Authority. E-mail: summer.l.cox@state.or.us.

> *As the field of medical genomics advances, the need to identify and promote the use of genomic applications that have analytic validity, clinical validity, and clinical utility increases. Currently, such genomic applications exist for hereditary breast and ovarian cancer (HBOC) syndrome, Lynch Syndrome (LS), and familial hypercholesterolemia (FH). However, genetic services for these conditions are rarely sought because (1) most individuals are unaware of their increased risk for these heritable conditions, and (2) healthcare providers are not prepared to handle the complexity and amount of genomics information that counseling and testing for these conditions entails.*

Read: Genetics and genomics education: The next generation (B. Korf)
http://www.nature.com/gim/journal/v13/n3/full/gim9201139a.html

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> *Technological advances that have resulted in reduced costs and more rapid turnaround of large scale DNA analysis (e.g. genome sequencing) have made unprecedented levels of genetic information available for use in clinical practice. However, the utilization of this technology is also associated with potential medical and ethical consequences. Ground rules for the use of genomic data by clinical geneticists are currently in development. Now is the time for the public health workforce to get educated and conversant with genomic medicine and its implications for improving population health.*

Watch: Genome Sequencing: A medical test that may reveal too much.
http://content.time.com/time/video/player/0,32068,1916421175001_2127453,00.html

Read: ACMG recommendations for reporting of incidental findings in clinical exome and genome sequencing. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3727274/

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> *The rapid expansion of genomic science presents distinct challenges for the public health community. Advances in genomics are heavily focused on the opportunities for expanding a personalized medicine (P4) approach. Beyond the individual approach is the population perspective, and the need for the definition of clear guidance in policy in an arena where the science is outpacing the ethical discussion in the arenas of access to care, health disparities, privacy, credentialing and insurance discrimination. The science of genomics is a fantastic gift to humankind if used wisely. But the greatest gifts can be the most socially and ethically abused, the best protection remains awareness, vigilance, and well-informed, evidence-based policy.*

Participate: GenomEthics Survey https://survey.sanger.ac.uk/genomethics/

Read: Shaping Public Health Policy in the Era of Genomics: A Legislative Briefing Book
http://www.geneforum.org/briefingbook